

CLINGFISH CARE

PURPOSE: To describe methods of care for clingfishes.

POLICY: To provide optimum care for all animals.

RESPONSIBILITY: Collector and user of animals. If these are not the same person, user takes responsibility of animals as soon as the animals have arrived on station.

PROCEDURE: At present there are two clingfish species found around BMSC.

Species:	Northern clingfish	<i>Gobiesox maeandricus</i>
	Kelp clingfish	<i>Rimicola muscarum</i>

Identification: Refer to Lamb and Edgell's book, "Coastal fishes of the Pacific Northwest" for in depth descriptions of individual specimens.

Gobiesox maeandricus: The body is flattened at the front and tapers towards the tail. They have a single dorsal fin located well back on the body, and a large, broad head. There is a large adhesive disk on the underside of the body. They are darkly colored and hide under cover virtually all their lives, attaching themselves to the undersides of rocks or logs.

Rimicola muscarum: These fish have slender bodies and narrow heads. The dorsal fin is located well back on the body. They have small adhesive disks on the underside of their bodies. They are well camouflaged and attach themselves to marine plants. Color is emerald green and yellow or golden brown. Commonly found in shallow, weedy bays.

Sites: Shallow subtidal or intertidal habitat. Intertidal sites are found on the shores of the Deer Group Islands, Dixon I., Scott's Bay, off the Blowhole, along Grappler Inlet and at the Harbor mouth across from Aguilar Pt.

Methods: Search under rocks and logs for the Northern clingfish, then dislodge by sliding its body along the shelter at the same time you're pulling it free off the rock or log. Kelp clingfish can be dip-netted from in amongst algae. Fish must be kept well oxygenated during the trip back to the lab. Ensure that you continually replenish fresh water during transportation.

Holding: Held in continually flowing seawater in large tanks. Lids are necessary.

Feeding: These fish feed on various small snails, worms and shrimp-like creatures. They will eventually eat chopped fish but it takes some time for them to adapt to it.

Tank Cleaning: Once every two weeks the fish should be removed from the tank and placed into a holding bucket. The tanks should be drained and the sides and bottom should be scrubbed and rinsed with warm freshwater. The tanks should then be rinsed with cold seawater and allowed to refill, and the fish replaced.

Anesthetic: Anesthetizing these animals is size, species, and density dependent; approximately 0.2mg/L of MS-222. Always wear gloves when using MS-222. Clove oil is most effective as an anesthetic at concentrations of 40-60 mg/L, and should be dissolved in ethanol (e.g., 1:9) before mixing into the water. Clove oil has a slightly faster induction time and a longer recovery time than similar concentrations of TMS. Clove oil has a wide margin of safety between effective and lethal doses, and fish do not show signs of distress when being anaesthetized.

Euthanasia: Euthanasia is size, species, and density dependent; inhalant anesthetic overdose of 0.4 - 2.0 g/L of MS-222.

Animal Return: Animals should be returned to the site of their collection. Be sure to have well oxygenated water in bucket that they are being returned in. If any anesthetic chemical has been used on the fish during it's holding at BMSC, the animal must not be released before the drug withdrawal time. Withdrawal time should be on the label of an anesthetic in degree-days (degree-days are the accumulated thermal units for a given day. One day at 10C is 10 degree-days).

Note: MS-222 has a 5 -day withdrawal time for salmon above 10C.

DAILY ACTIVITIES:

1. Ensure water is flowing into the tank at a reasonable rate.
2. Ensure the standpipe is in place and not blocked.
3. Check for and remove and dead animals.
4. Check for and remove any uneaten prey organisms.
5. Check for and remove and foreign organisms.